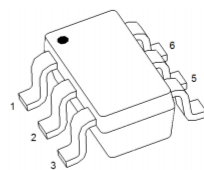


$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30 V	55mΩ@-10V	-5A
	72mΩ@-4.5V	



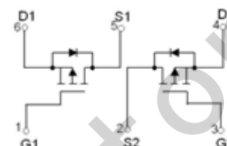
SOT-23-6L

FEATURE

- TrenchFET Power MOSFET
- Low Gate Charge
- Low On-resistance
- Surface Mount Package

APPLICATION

- DC/DC converter
- Load switch for portable devices
- Commercial-industrial applications



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	-5	A
Pulsed Drain Current (note 1)	I_{DM}	-20	A
Power Dissipation (note 2)	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~ 150	$^{\circ}\text{C}$

- Notes :**
1. Pulse width limited by Max.junction temperature.
 - 2.Per element must not be exceeded

MOSFET ELECTRICAL CHARACTERISTICS

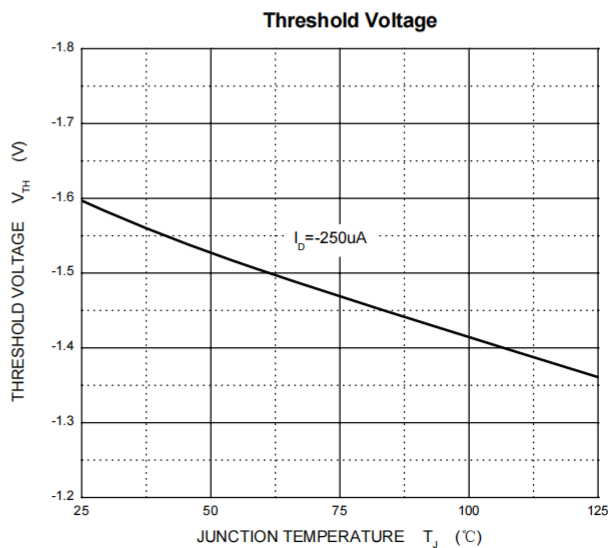
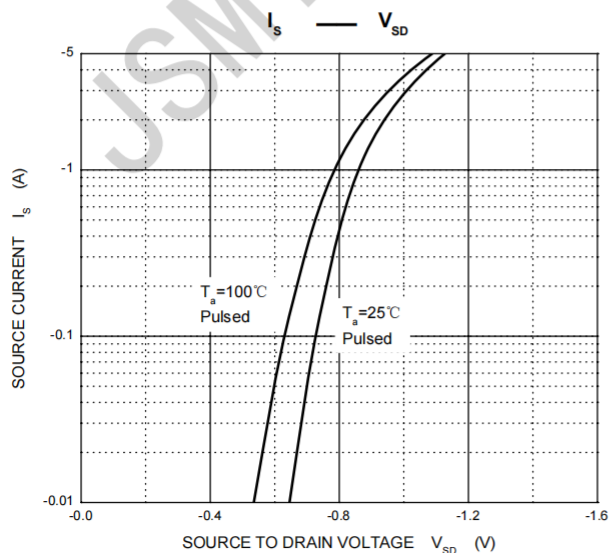
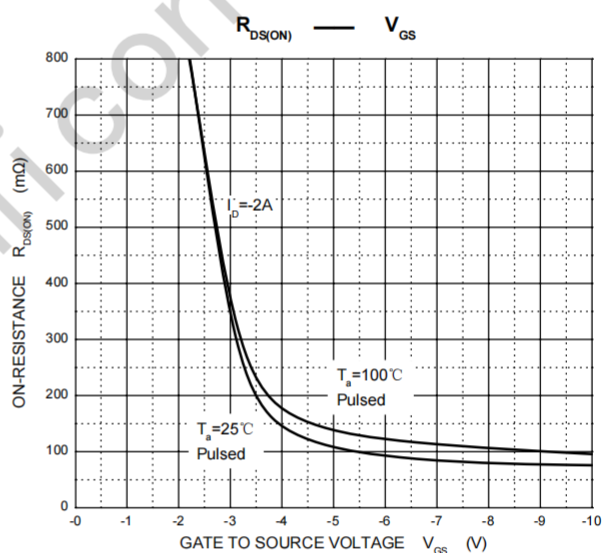
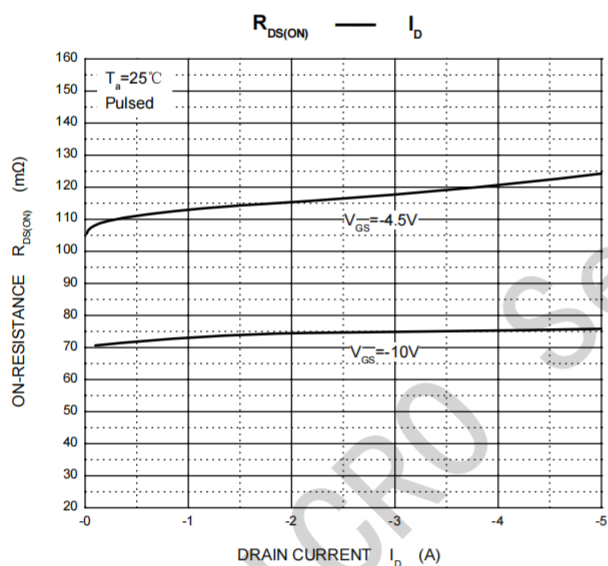
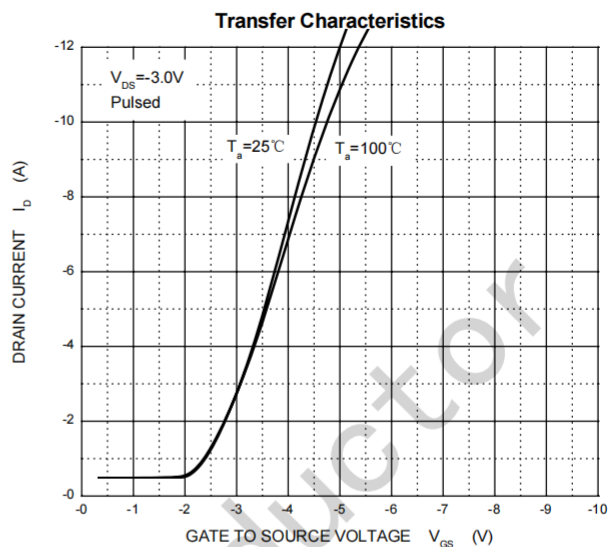
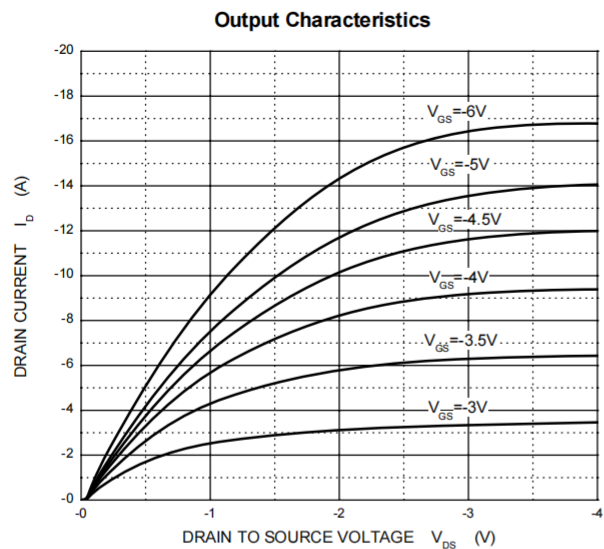
$T_a = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 12V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-0.6		-1.2	V
Drain-source on-resistance (note 3)	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -4A$		45	55	m Ω
		$V_{GS} = -4.5V, I_D = -3A$		58	72	m Ω
Forward tranconductance	g_{FS}	$V_{DS} = -5V, I_D = -2A$		2		S
Diode forward voltage (note 3)	V_{SD}	$I_S = -1A, V_{GS} = 0V$			-1.2	V
DYNAMIC PARAMETERS(note 4)						
Input Capacitance	C_{iss}	$V_{DS} = -25V, V_{GS} = 0V, f = 1MHz$			240	pF
Output Capacitance	C_{oss}			42		pF
Reverse Transfer Capacitance	C_{rss}			32		pF
SWITCHING PARAMETERS (note 3,4)						
Turn-on delay time	$t_{d(on)}$	$V_{DD} = -15V, V_{GS} = -10V, I_D = -1A$ $R_D = 15\Omega, R_G = 3.3\Omega$		5		ns
Turn-on rise time	t_r			6		ns
Turn-off delay time	$t_{d(off)}$			15		ns
Turn-off fall time	t_f			3		ns
Total Gate Charge	Q_g	$V_{DS} = -24V, V_{GS} = -4.5V, I_D = -2A$			4.5	nC
Gate-Source Charge	Q_{gs}			0.5		nC
Gate-Drain Charge	Q_{gd}			1.4		nC

Notes : 3. Pulse Test : Pulse width $\leq 300\mu s$, duty cycles $\leq 2\%$.

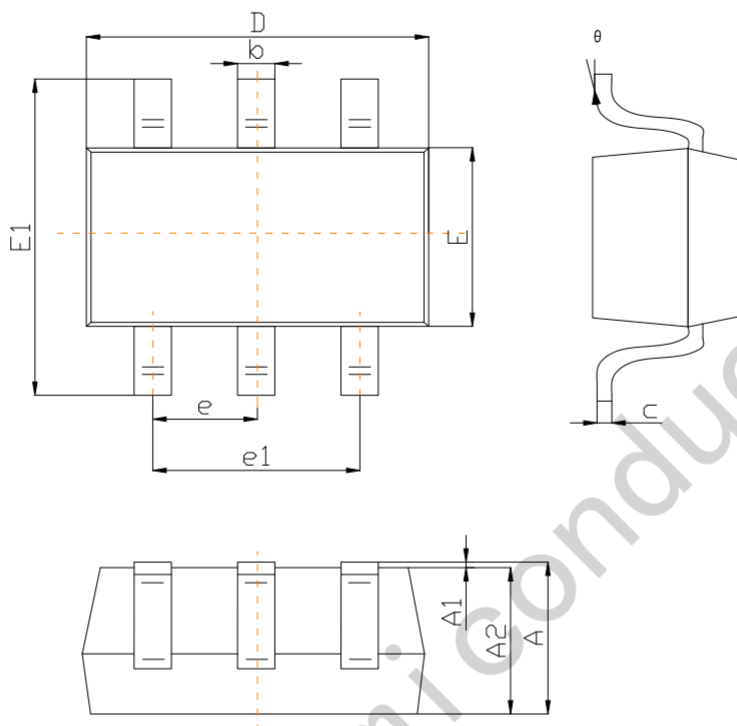
4. Guaranteed by design, not subject to production testing.

Typical Characteristics



Package Information

SOT23-6



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100		0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
	0°	8°	0°	8°